

Amendments to the Claims

This Listing of Claims will replace all prior versions, and listings, of claims in the application.

Listing of claims

1. (Currently amended) Method for determining whether a substance is a modulator of ~~a target component in a cell~~ an ion-channel/receptor system containing a ligand controlled or mechanically controlled ion channel, comprising the steps of:

- (a) preparing a cell, which contains the ~~target component~~ ion-channel/receptor system, wherein the cell is immobilized on an extracellular potential-sensitive electrode,
- (b) bringing a substance to be tested in contact with the cell, in a medium which has a total salt concentration of ≤ 100 mmol/L,
- (c) measuring a signal at the electrode due to the ~~target component~~ ion-channel/receptor system, and
- (d) determining the effect of the substance to be tested on the measurement signal.

2-4. Canceled.

5. (Currently amended) Method according to Claim ~~[[4]]~~ 1, characterized in that the ion channel is a potassium channel.

6. Canceled.

7. (Currently amended) Method according to Claim ~~[[3]]~~ 1, characterized in that the ion-channel/receptor system contains an NMDA, GABA, AMPA or acetylcholine receptor.

8. (Currently amended) Method according to Claim 1, furthermore comprising stimulation of the ~~target component in the cell~~ ion-channel/receptor system.

9. (Currently amended) Method according to Claim 8, characterized in that the stimulation of the ~~target component~~ ion-channel/receptor system comprises electrical, optical or/and chemical stimulation.

10. (Currently amended) Method according to Claim 9, characterized in that the stimulation of the ~~target component~~ ion-channel/receptor system comprises the application of a DC voltage or an AC voltage.

11. Canceled.

12. (Previously presented) Method according to Claim 1, characterized in that the potential-sensitive extracellular electrode is arranged on a chip.

13. (Previously presented) Method according to Claim 1, characterized in that an array comprising a multiplicity of cells immobilized on different electrodes is prepared, and a multiplicity of substances are tested.

Claims 14-23. (Canceled)